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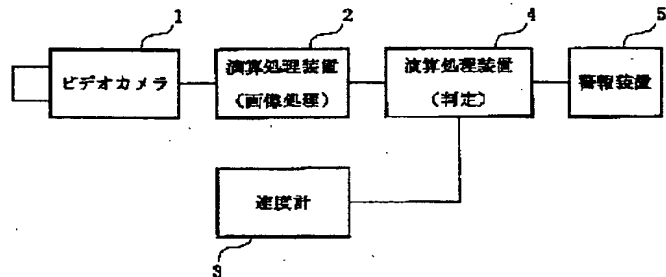
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TITLE : FORWARD MONITORING METHOD
FOR VEHICLE



ABSTRACT : PURPOSE: To judge a degree of danger due to a traveling vehicle and the like in front and other obstacles on the road automatically and at high speed by using a foreground image by a video camera without using a distance sensor for measuring an inter-vehicle distance to the preceding vehicle.

CONSTITUTION: Movement of the same point on an object shown in two frames of images chronologically continuing in a series of foreground animations is detected as an optical flow vector, and danger is judged by its size. A narrow window set in the radical direction from FOE of the previous image is moved in the same direction on the successive image, and the optical flow vector of a point to be aimed at is set as an arrow connecting each of the central points of the position of the window where the sum of absolute values of difference in brightness of the area on the successive image that the window overlaps the window becomes the minimum, and the set position of the window in the previous image. However, the point to obtain the optical flow is the only point that the difference in brightness between the previous and successive images exceeds a certain threshold value so that influence of landscape outside the road or a traffic lane, letters or characters drawn on the road should be eliminated in obtaining the optical flow.

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